

Sommerfeld et al.

S/N: 10/605,570

In the Claims

What is claimed is:

1. (Original) A shielding cup comprising:
a body having an outer surface;
a first end connectable to a torch;
a second end connectable to a shield; and
a coating on at least one of the outer surface of the body, the first end, and the second end, the coating being thermally responsive so as to provide an indication of temperature.
2. (Original) The shielding cup of claim 1 wherein the coating is further configured to emit an odor to indicate temperature.
3. (Original) The shielding cup of claim 1 wherein the coating emits light so as to indicate temperature.
4. (Original) The shielding cup of claim 1 wherein the coating changes color so as to indicate temperature.
5. (Original) The shielding cup of claim 1 wherein the coating is capable of indicating a range of temperatures.
6. (Original) The shielding cup of claim 1 further comprising another coating on a portion of the shielding cup to provide an indication of another temperature.
7. (Original) The shielding cup of claim 1 wherein the body further defines a gas chamber configured to support heating of a gas to a plasma state.
8. (Original) The shielding cup of claim 1 wherein the gas chamber accommodates an electrode and a cutting tip therein.
9. (Original) The shielding cup of claim 1 further comprising a sensor integrally formed with the shielding cup and constructed to communicate with a power source to limit power from the power source if the temperature exceeds a predetermined temperature.

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10. (Original) A plasma cutter comprising:
 - a power source configured to condition power into a form usable for a plasma cutting process;
 - a torch connected to the power source and configured to effectuate the plasma cutting process;
 - a shielding cup connected to the torch; and
 - a temperature indicator configured to indicate a temperature of the shielding cup.
11. (Original) The plasma cutter of claim 10 wherein the temperature indicator is one of a coating on the shielding cup, an integral component of the shielding cup, and a sensor about the shielding cup.
12. (Original) The plasma cutter of claim 10 wherein the temperature indicator emits an odor so as to indicate temperature.
13. (Original) The plasma cutter of claim 10 wherein the temperature indicator changes color so as to indicate temperature.
14. (Original) The plasma cutter of claim 10 wherein the temperature indicator emits light so as to indicate temperature.
15. (Original) The plasma cutter of claim 10 further comprising a tip and an electrode configured to at least partially pass into the shielding cup.
16. (Original) The plasma cutter of claim 10 further comprising a shield attached to an end of the shielding cup.
17. (Original) The plasma cutter of claim 10 further comprising another temperature indicator of the shielding cup configured to indicate another temperature of the shielding cup, the another temperature being different from the temperature indicated by the temperature indicator.
18. (Currently Amended) A plasma torch consumable kit comprising;

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an electrode;
a tip; and
a shielding cup constructed to provide a temperature indicative of a consumable condition to prevent overheating indication.

19. (Original) The kit of claim 18 further comprising a shield connectable to an end of the shielding cup.

20. (Original) The kit of claim 18 further comprising an O-ring having a diameter substantially similar to a diameter of the shielding cup and positioned between the shielding cup and a torch body.

21. (Original) The kit of claim 18 further comprising a swirl ring constructed to fit within the shielding cup.

22. (Original) The kit of claim 18 wherein the shielding cup is constructed to be attached to a plasma torch body.

23. (Currently Amended) A method of manufacturing a plasma torch consumable comprising the steps of:

providing a shielding cup having a body; and
forming the shielding cup to indicate a predetermined temperature after which further operation would result in overheating.

24. (Original) The method of claim 23 wherein the step of forming the shielding cup further comprises applying a temperature indicative coating to an outside surface of the body of the shielding cup.

25. (Original) The method of claim 23 further comprising the step of providing an electrode constructed to fit within the body.

26. (Original) The method of claim 23 further comprising the step of providing a swirl ring constructed to fit within the body.

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27. (Original) The method of claim 24 further comprising the step of applying a second temperature indicative coating to the body, wherein the second temperature indicative coating is configured to indicate a second temperature.

28. (New) A method of manufacturing a plasma torch consumable comprising the steps of:

providing a shielding cup having a body;
forming the shielding cup; and
applying a temperature indicative coating to a surface of the body of the shielding cup.